State=Idle

1. Initialize the inventory with predefined products (slotID, SKU, quantity, maxQuantity, minQuantity, price, description)

2. Initialize a variable currentSession as an empty list

3. Initialize a variable currentTransaction as an empty dictionary

4. Initialize a variable totalCost as 0

5. Print "Waiting for customer interaction..."

6. Repeat while the machine is ON:

a. If a customer starts interaction:

i. Set a variable customerActive as True

ii. Print "Please select a product."

b. While customerActive:

i. If a customer selects a product (inputSlotID):

1. For each product in inventory:

a. If product.slotID matches inputSlotID:

i. Add product details to currentTransaction

ii. Add currentTransaction to currentSession

iii. Print "Product added to basket. Proceed to payment or select another product."

ii. If a customer chooses to pay:

1. For each transaction in currentSession:

a. Add transaction.price \* transaction.quantity to totalCost

2. If paymentSystem.processPayment(totalCost) is successful:

a. Print "Payment Successful. Dispensing items..."

b. For each transaction in currentSession:

i. Find corresponding product in inventory

ii. Decrease product.quantity by transaction.quantity

iii. If product.quantity equals product.minQuantity:

1. Order more of the product

iv. Dispense item

c. Set currentSession as an empty list

d. Set totalCost as 0

e. Set customerActive as False

f. Print "Transaction completed. Thank you!"

3. Else:

a. Print "Payment failed. Please try again or cancel the session."

iii. If a customer chooses to cancel:

1. Set currentSession as an empty list

2. Set totalCost as 0

3. Set customerActive as False

4. Print "Session cancelled. Please start a new session."

7. If the machine is turned OFF:

a. Print "Vending machine is now off."